

A LITTLE PIECE OF FOREST OR TUNDRA



Grade Level: 6-12

Alaska State Content Standards: LD1, LD2, LD4, LE2, GeoE4, GeoE5, GeoE6, GeoF3, GovG3

Subject: Language Arts, Geography, Government

Skills: Analysis, Comparison, Generalization, Problem-Solving

Duration: 2-3 class periods

Group Size: individual

Setting: indoors

Vocabulary: management policy, interest groups

OBJECTIVE

Students describe the different opinions usually associated with forest management.

TEACHING STRATEGY

Students role play different interest groups associated with forest management decisions.

MATERIALS

- Writing materials
- Fire Policy Cards: Boreal Forest
Tundra
- Fire Role Cards
- 3 blank sheets of paper for each student
- Markers

TEACHER BACKGROUND

Local **interest groups**, industry, and government agencies have concerns about how forest resources are managed. Hunters, fishermen, bird watchers, firewood cutters, gold miners, trappers, and others are sensitive to any changes in forest **management policies** that may affect the future of their activities.

Different public agencies manage lands according to their federal or state guidelines. Their challenge is to manage their land according to their guidelines, with consideration given to all the interest groups involved. It is important to learn how to negotiate and compromise in a group situation.

ADVANCED PREPARATION

1. Copy, laminate, and cut out "Fire Role Cards" so that every student has a card. You may need to make more than one copy of some of the cards to have enough.
2. Copy, laminate, and cut out one set of "Fire Policy Cards".

PROCEDURE

1. Distribute one "Fire Role Cards" to each student. The students receiving the "Expert" cards will be required to answer questions as that expert.
2. Ask each student to read his/her card carefully and to imagine that they are the person described in the card. They are to forget their own opinions and think only like the person they are portraying. Make sure that the students understand that they are only portraying one person's opinion in that role and that other people in that role may have different opinions.
3. Each student should have a marker and three pieces of paper. On each paper students should write (in large letters) one of the following response phrases:
 - Agree
 - Disagree
 - Need more information
4. Explain that students are attending a public meeting at which they will be invited to give input on the development of policies and regulations for use of a public forest. You will represent a land manager conducting the meeting and students will represent people who are experts or are interested in forest management for business or personal reasons.

5. Explain the procedure to students. You will read a "Fire Policy Card," give the students a minute to think about it, and then ask them to hold up the response card that represents their reaction to the policy read. Ask those who agree with the policy who they represent and why they agreed. Repeat this format with those that disagreed. Students that need more information may ask questions of the "experts." If the "experts" do not know the answer, discuss where a person might be able to get more information.
6. Finally, after hearing all the input, read the policy again. Then ask students whether any would like to change their opinions. What caused them to change? Repeat the above steps for each Fire Policy Card.

EVALUATION

1. Discuss with the students how they felt about the revised policy. Were they frustrated with the procedure? How does this game resemble real life? How does it differ?
2. Pick a policy where groups of students both agreed and disagreed. Make two groups, one of students that agreed and one of students who disagreed with the policy. Give each group 5-10 minutes to write a new revised policy that represents their viewpoint. Ask the groups to read their policy to the entire class. Once each group's policy is heard, the entire class will negotiate a final policy that is in the best interest of the resource and that the majority of the class can agree on. You, as the land manager, monitor the negotiations, suggesting compromises.

FIRE POLICY CARDS

Boreal Forest

<p>Prescribed burning should be done to increase browse for moose where the moose population is declining.</p>	<p>All Forest fires should be put out.</p>
<p>Loggers and firewood cutters should be allowed to cut dead trees out of a burned area.</p>	<p>Trees that have been killed by spruce bark beetles should be removed from the forest.</p>
<p>We should let all forest fires burn.</p>	<p>Prescribed burning should be done to remove the trees that have been killed by spruce bark beetles.</p>

FIRE POLICY CARDS

Tundra

<p>Grass fires should continue to be set as they have been in the past.</p>	<p>All wildland fires should be put out.</p>
<p>Fires in peat bogs should be put out even though they may have smoldered for over a year.</p>	<p>Large areas that have lichen growth that may take 50 years or more to regrow should have fires fought.</p>
<p>We should let all fires burn.</p>	

FIRE ROLE CARDS

<p>Hunter: You harvest animals such as moose to feed yourself, your family and some older people who can no longer hunt. The removal of trees from the forest encourages brushy vegetation to grow, making more food for moose. The fires that burn through tundra may encourage additional plant growth but may damage some slow growing lichens.</p>	<p>Trapper: You harvest fox and marten to sell and make clothing for your family. The higher the animal population, the more you can harvest. Fires eventually improve habitat for these animals because their prey, small birds, rodents, and hares find abundant food in recently burned areas.</p>
<p>Private Firewood Cutter: You heat your home entirely with wood. Every summer you collect enough wood to provide you with sufficient firewood for the next winter.</p>	<p>Bird Watcher: You enjoy hiking and looking for different kinds of birds. You know that different kinds of birds live in different habitats; in order to see a greater variety of birds, you want to protect all kinds of habitats.</p>

FIRE ROLE CARDS

<p>(Forest) Commercial Logger: You earn a living by cutting firewood and selling it to other people. The more firewood people need and the more you can cut, the more money you make.</p>	<p>Fire fighter: You earn your living by putting out fires. When there are few fires or fires are allowed to burn, there is little work for you.</p>
<p>Store Owner: You sell hardware, groceries, and have an ice cream truck in the summer for tourists. Your business depends on the population growth in the area..</p>	<p>Photographer: You make your living selling scenic and wildlife photographs to publishers and other businesses. Fires make the area "uglier"; however, there seems to be a market for forest fire documentation.</p>

FIRE ROLE CARDS

<p>Mother: You have 3 children, a husband, and grandparents for whom you gather many of the traditional plants. You find that the area that was burned 8 years ago has an abundance of the food you like to gather.</p>	<p>Commercial Pilot: You own a small commercial airline that transports people and supplies into and out of the area. Fires produce a large amount of smoke, sometimes making it unsafe to fly. Fires also bring you business if people and supplies need to be transported.</p>
<p>Fire Expert: You are concerned about protecting people and property from wildland fires. You know that fires in areas near towns or small villages present a more serious threat to people than do wildland fires in areas distant from inhabited areas. You know that if forest fires are put out there will be a build-up of fuels, which often leads to a more severe fire in the future. You feel it important to monitor all wildland fires and put out those that threaten people. Because it is very expensive to put out fires, you think those that do not pose a threat should be watched carefully, but allowed to burn. You realize that if more people are allowed to build homes in remote areas, it will become more important to put out fires in those areas. This will make it more difficult to allow fires to perform their natural role, and it will cost the public much more money.</p>	<p>Landowner: You own land adjacent to the forest and plan to cut logs to build a home there in the future. You like to hunt, but also enjoy seeing animals wander through your property. You hope the firebreak along the forest boundary might provide access to the property..</p>

FIRE ROLE CARDS

<p>Moose Expert: You are concerned about protecting habitat for moose so that they will remain abundant. You know that moose feed on shrubs and saplings that are most numerous in areas in forests during the early stages of succession. These shrubs may be more abundant in mature tundra. Suppression of fires may reduce the amount of tall shrub areas by allowing these forest areas to mature, thus reducing the amount of feeding habitat for moose.</p>	<p>Atmosphere Expert: You are concerned about the atmosphere and the air we breathe. You know that healthy vegetation is important in keeping the air clean and in removing dust, carbon dioxide, and pollutants. They also return oxygen to the air. Fires release smoke and ash into the air, sometimes causing short term breathing difficulties for people..</p>
<p>(Forest) Tree-growing Expert: You know that spruce bark beetles live and breed in dead and dying trees. Certain conditions promote spruce bark beetle outbreaks that kill live, healthy trees. You want to stop the loss of trees to the spruce bark beetle. You believe that trees infested by spruce bark beetles should be removed from the forest.to allow fires to perform their natural role, and it will cost the public much more money.</p>	<p>Bird Expert: You are concerned about protecting habitat for birds. You know that a fire sometimes improves habitat for some kinds of birds, while it destroys habitats for other kinds. To provide habitat for the greatest variety of birds it is important to have aging forests, young forests, cleared areas, and the areas where these habitats meet (edges). Dead and dying trees provide important feeding and nesting sites for some kinds of birds. Some birds eat insects like the spruce bark beetle and help reduce disease that may kill trees.</p>

FIRE ROLE CARDS

<p>Watershed Expert: You are concerned about protecting the water supplies for towns and villages and about preventing floods and droughts. You know that vegetation is very important in the water cycle, returning moisture to the air and storing and purify water. You know that burning of large areas can cause more frequent and severe flooding and can result in less water in streams during dry periods.</p>	<p>Waterfowl Expert: You are interested in preserving breeding habitat for waterfowl. Good breeding habitat includes the availability of wetlands with high quality water to support substantial invertebrate populations and aquatic plants for waterfowl food. In addition, nearby nesting cover must be available. The waterfowl nesting season is May-July. The removal of nesting cover, decline in food resources, or other disturbances could have an adverse impact on nesting success. Many North American waterfowl populations are declining due to loss of breeding habitat. Alaska has many areas that are critical nesting habitat.</p>
<p>Furbearer Expert: You are concerned about protecting habitat for furbearers such as marten and foxes. You know that openings in boreal forests created by fires and other disturbances can improve habitat for mice, voles, birds, and hares, the main prey of furbearers. These prey animals require adequate ground cover and shrubby plants that provide food. Some furbearers require patches of old forest for cover and denning. Fire may encourage new growth in tundra as well.</p>	<p>Village Elder: You are a member of the Village Council that works hard to help the younger generation learn to understand and appreciate the traditional values your father and grandfather taught you. You feel that in the past the small natural fires around your village have provided a variety of habitat that allows the traditional ways to flourish.</p>

** The commercial logger and tree growing expert roles will not be assigned in a tundra ecosystem.